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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,813	10/27/2003	Sheng-Jye Hwang	MR1917-131	9689
4586	7590	09/20/2006	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			TENTONI, LEO B	
			ART UNIT	PAPER NUMBER

1732  
DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/692,813

Applicant(s)

HWANG ET AL.

Examiner

Leo B. Tentoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 1, the expressions "activating" (steps 2 and 3), "one or more first selected areas" (step 2), "different from the first" (step 3), "second selected areas" (step 3), "second selected area" (step 3), "stacked sectional layers" (step 4), "forming a connection between the layers" (step 4) and "activation" (step 5) do not have clear and antecedent basis in the claim and thus, constitute new matter. In claim 4, the expressions "the first selected areas" and "activated" do not have clear and proper antecedent basis in the claim and thus, constitute new matter. In claim 5, the

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expression "activation" does not have clear and proper antecedent basis in the claim and thus, constitutes new matter. In claim 6, the expressions "activating" (steps 2 and 3), "one or more first selected areas" (step 2), "different from the first" (step 3), "second selected areas" (step 3), "second selected area" (step 3), "stacked sectional layers" (step 4), "forming a connection between the layers" (step 4) and "activation" (step 5) do not have clear and proper antecedent basis in the claim and thus, constitute new matter. In claim 9, the expression "activated" does not have clear and proper antecedent basis in the claim and thus, constitutes new matter. While applicant is entitled to be his/her own lexicographer, there still must be clear and proper antecedent basis in the originally-filed specification for all claimed subject matter.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The expressions "activating" (claims 1 and 6, steps 2 and 3), "different from the first" (claims 1 and 6, step 3), "stacked sectional layers" (claims 1 and 6, step 4), "forming a connection between layers" (claims 1 and 6, step 4), "activation" (claims 1 and 6, step 5; claim 5), "adding additional material" (claim 5; claim 6, step 3) and "activated" (claims 4 and 9) render the claims indefinite principally because it is not clear exactly what applicant intends to cover by these recitations (e.g., what do "activated", "activating" and "activation" mean; how is the second physical or chemical change different from the first physical or chemical change; how are the layers stacked; how is a connection formed between the layers; how does adding additional material cause a change).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a),

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the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al (U.S. Patent 6,841,589 B2) in combination with Murphy et al (U.S. Patent 4,945,032 A).

Schmidt et al (see the entire document, in particular, col. 2, lines 18-38; col. 5, line 61 to col. 6, line 6; col. 7, lines 10-25) teaches a process of making objects as set forth in the instant claims, except that Schmidt et al does not explicitly teach claim 1, step 92) (i.e., a first time physical or chemical change by UV or IR; Schmidt et al teaches a first time change by lowering the temperature), which is taught by Murphy et al (see the entire document, in particular, col. 2, line 59 to col. 3, line 3; col. 4, lines 36-51; Murphy et al teaches using two-time reaction) and would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of

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Schmidt et al in view of Murphy et al principally in order to reduce distortion and improve mechanical behavior of the formed object. Adding additional material (e.g., but not limited to, a curing agent) would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of Schmidt et al in view of Murphy et al principally in order to harden (or solidify) the formed object.

***Response to Arguments***

8. Applicant's arguments filed on 13 July 2006 have been fully considered but they are not persuasive.

9. Schmidt et al does teach the aspect of a second physical or chemical change different from the first because Schmidt et al teaches using a UV laser for the second physical or chemical change and the combination of Schmidt et al and Murphy et al teaches the claimed subject matter because Murphy et al teaches a first change by UV laser and a second change by UV laser wherein the characteristics of the two applications (e.g., scan speed, dosage per scan, dosage per layer) is different, resulting in two different changes.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is

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reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

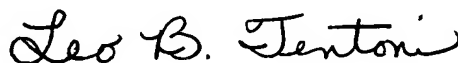
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo B. Tentoni whose telephone number is (571) 272-1209. The examiner can normally be reached on Monday - Friday (6:30 A.M. - 3:00 P.M.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Leo B. Tentoni  
Primary Examiner  
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lbt